WHAT IS CLAIMED IS:

1. A vaso-occlusive device comprising a filamentous structure formed into a minimum energy state secondary configuration comprising a plurality of curved segments, each defining a discrete axis, whereby the device, in its minimum energy state configuration, defines multiple axes.

2. The device of Claim 1, wherein each of the curved segments defines a plane and an axis that is substantially perpendicular to the plane.

3. The device of Claim 1, wherein the multiple axes are substantially parallel.

4. The device of Claim 1, wherein each adjacent pair of the multiple axes forms an acute angle.

5. The device of Claim 1, wherein the curved segments are substantially closed loops, interconnected to each other.

6. The device of Claim 1, wherein the curved segments are wave-like open loops.

7. The device of Claim 6, wherein open loops define a substantially sinusoidal waveform.

8. The device of Claim 7, wherein the waveform has a maximum and a minimum, wherein each of the maximum and minimum defines an arc of radius length r, and wherein each arc is connected to an adjacent arc by a straight section having a length that is less than about 2r.

9. The device of Claim 5, wherein the closed loops are arranged tangentially to each other.

10. The device of Claim 5, wherein at least one of the loops overlaps an adjacent loop.

11. The device of Claim 9, wherein each loop defines an axis that is orthogonal to a unique radius of a circle, wherein the radii are separated by a fixed angle of arc.

12. The device of Claim 5, wherein the device comprises a plurality of loops of progressively decreasing diameter from a largest loop to a smallest loop.

13. The device of Claim 12, wherein the smallest loop is a first smallest loop, and wherein device further comprises a second smallest loop immediately adjacent the largest loop.

14. The device of Claim 1, wherein the device is dimensioned for installation in a vascular site having a predetermined maximum dimension, and wherein the device has at least one dimension, in its secondary configuration, that is at least 25% greater than the maximum dimension of the vascular site.

15. The device of Claim 1, wherein the device is dimensioned for installation in a vascular site having a predetermined maximum diameter, and wherein the device, in its secondary configuration, has at least one curved segment having a diameter that is approximately equal to the maximum

diameter of the vascular site.

16. The device of Claim 14, wherein the device has a length, in its secondary configuration, that is at least twice the maximum dimension of the vascular site.

17. The device of Claim 1, wherein the filamentous structure is selected from the group consisting of a microcoil, a wire, a slotted wire, a spiral cut wire, a tube, a slotted tube, a spiral cut tube, a polymer filament, a polymer/metal composite filament, and a micro-chain.

18. The device of Claim 1, wherein each of the curved segments is a logarithmic spiral.

19. The device of Claim 5, wherein the structure, in its minimum energy state secondary configuration, subtends a first angle of arc that is greater than about 30°, and wherein each adjacent pair of loops defines a second angle of arc between them, the second angle of arc being less than about half of the first angle of arc.

20. A vaso-occlusive device comprising a filamentous element formed into a minimum energy state secondary configuration comprising a plurality of interconnected, substantially closed loops, each defining a plane and a discrete axis that is substantially perpendicular to the plane.

21. The device of Claim 20, wherein the axes are substantially parallel.

22. The device of Claim 20, wherein each adjacent pair of the axes

forms an acute angle.

23. The device of Claim 20, wherein the closed loops are arranged tangentially to each other.

24. The device of Claim 20, wherein at least one of the loops overlaps an adjacent loop.

25. The device of Claim 23, wherein each loop defines an axis that is orthogonal to a unique radius of a circle, wherein the radii are separated by a fixed angle of arc.

26. The device of Claim 20, wherein the device comprises a plurality of loops of progressively decreasing diameter from a largest loop to a smallest loop.

27. The device of Claim 26, wherein the smallest loop is a first smallest loop, and wherein device further comprises a second smallest loop immediately adjacent the largest loop.

28. The device of Claim 20, wherein the device is dimensioned for installation in a vascular site having a predetermined maximum dimension, and wherein the device has at least one dimension, in its secondary configuration, that is at least 25% greater than the maximum dimension of the vascular site.

29. The device of Claim 20, wherein the device is dimensioned for installation in a vascular site having a predetermined maximum diameter, and

wherein the device, in its secondary configuration, has at least one curved segment having a diameter that is approximately equal to the maximum diameter of the vascular site.

30. The device of Claim 28, wherein the device has a length, in its secondary configuration, that is at least twice the maximum dimension of the vascular site.

31. The device of Claim 20, wherein the filamentous element is selected from the group consisting of a microcoil, a wire, a slotted wire, a spiral cut wire, a tube, a slotted tube, a spiral cut tube, a polymer filament, a polymer/metal composite filament, and a micro-chain.

32. A method of embolizing a vascular site having a predetermined maximum diameter, comprising the steps of:

(a) providing vaso-occlusive device comprising a filamentous structure formed into a minimum energy state secondary configuration comprising a plurality of interconnected curved segments, whereby the device, in its minimum energy state configuration, has a length that is at least about 25% larger than the maximum diameter of the vascular site; and

(b) deploying the device into the interior of the vascular site so that device is contained within the vascular site in a configuration having an energy state that is substantially higher than its minimum energy state, whereby the device is constrained by its contact with the vascular site from returning to its minimum energy state configuration.

33. The method of Claim 32, wherein the device has a length in its minimum energy state secondary configuration that is at least about twice the

maximum diameter of the vascular site.

34. The method of Claim 32, wherein the device, in its minimum energy state secondary configuration, has at least one curved segment having a diameter that is approximately equal to the maximum diameter of the vascular site.

35. The method of Claim 32, wherein each of the curved segments is a substantially closed loop, each defining a discrete axis.

36. The method of Claim 32, wherein each of the curved segments is a wave-like open loop, each defining a discrete axis.

37. The method of Claim 32, wherein each of the curved segments is a logarithmic spiral.

38. The method of Claim 32, wherein each of the curved segments is defined by a path around the surface of a sphere, the path being defined by a unique locus at the approximate center point of the sphere around which the path is generated, and by a radius extending from the center point that is equal to the radius of the sphere.

39. A vaso-occlusive device for embolizing a vascular site having a predetermined maximum diameter, the device comprising:

a filamentous structure formed into a minimum energy state secondary configuration comprising a plurality of curved segments, whereby the device, in its minimum energy state configuration, has a length that is at least about 25% larger than the maximum diameter of the vascular site.

40. The device of Claim 39, wherein the device has a length in its minimum energy state secondary configuration that is at least about twice the maximum diameter of the vascular site.

41. The device of Claim 39, wherein the device, in its minimum energy state secondary configuration, has at least one curved segment having a diameter that is approximately equal to the maximum diameter of the vascular site.

42. The device of Claim 39, wherein each of the curved segments is a substantially closed loop, each defining a discrete axis.

43. The device of Claim 39, wherein each of the curved segments is a wave-like open loop, each defining a discrete axis.

44. The device of Claim 39, wherein each of the curved segments is a logarithmic spiral.

45. The device of Claim 39, wherein each of the curved segments is defined by a path around the surface of a sphere, the path being defined by a unique locus at the approximate center point of the sphere around which the path is generated, and by a radius extending from the center point that is equal to the radius of the sphere.